

COMPARABLE EVALUATION OF YACHT HAVEN BOATYARD
AND
205 MAGEE AVENUE PROPOSED MARINA

City of Stamford

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SECTION 1

INTRODUCTION

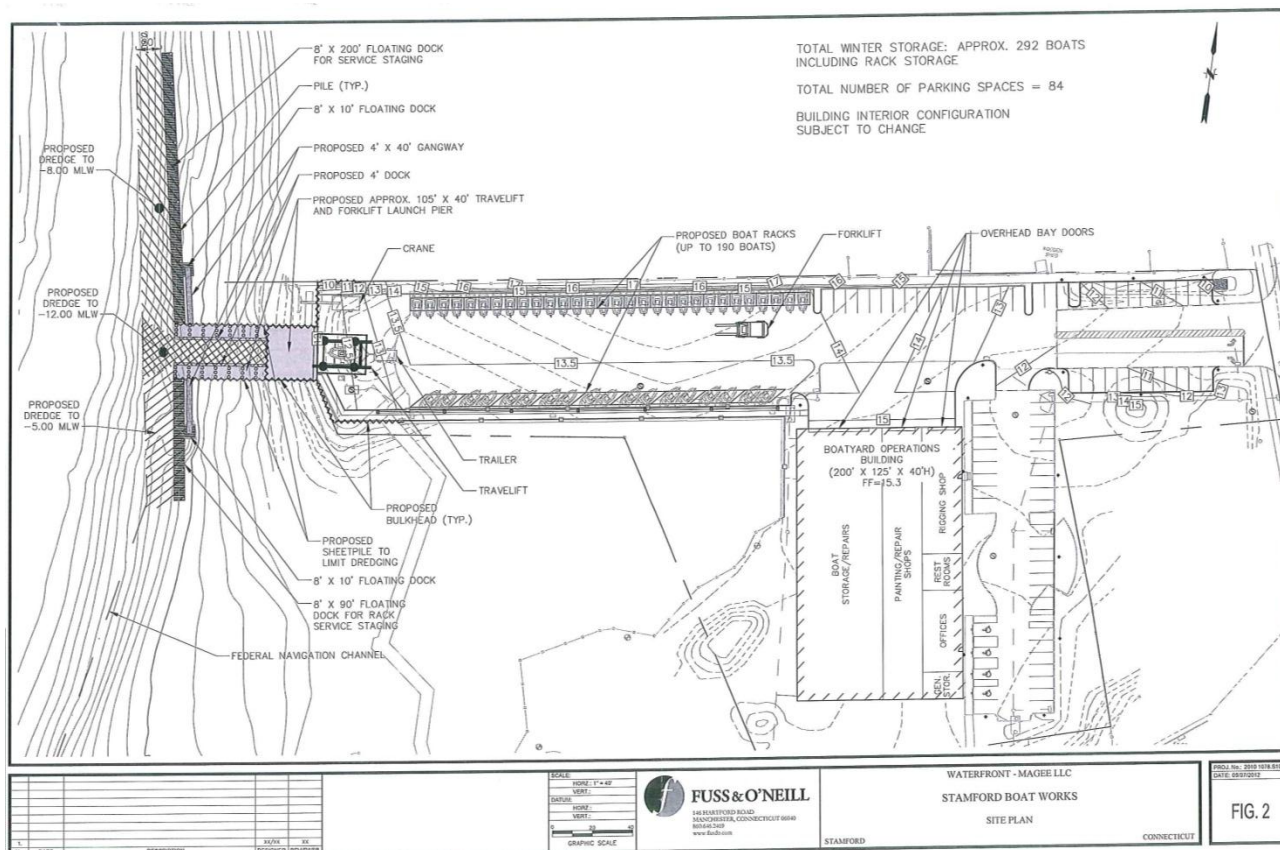
The City of Stamford engaged Bermello, Ajamil & Partners Architects, Inc. (B&A) to evaluate, in a comparative form, a proposal for a marina/boatyard located at 205 Magee Avenue to the existing Brewers Yacht Haven West marina and boatyard facilities located within the City. This site is being proposed for conversion to office and other uses.

The comparison involves the Yacht Haven site shown in Figure 1.1 with a recent aerial photograph; the site as it stands today is predominately vacant. Compared to the proposal received by the City for the 205 Magee Avenue boatyard shown in Figure 1.2.

Figure 1.1 – Recent aerial photograph of Yacht Haven



Figure 1.2 – Proposed 205 Magee Avenue Facilities



A listing of the documents that have been provided to B&A is included in the Appendix of this report, and have been used extensively to generate information and evaluations.

All of the information as to how the site operated and what was on the site has been provided by the City of Stamford to B&A based on historic documents, aerial photographs, and other documents all listed in the Appendix.

Part of the evaluation which is being considered is comparing the marine value of the property and the comparable marine site which has been proffered by the developer.

COMPARISON APPROACH

In comparing the 205 Magee proposal to the Yacht Haven facility, the first question raised is to determine which benchmark is to be used for comparison. It is apparent from a current visit that the facility as it stands today is not representative of the facilities and services that it once provided to the marine community. It is also evident that the Yacht Haven property and the services that it provided and the infrastructure that were in place evolved with the time.

The comparison point as established by the Scope of Services of this assignment was established by the City and directed B&A to compare the 205 Magee proposal with the condition of the Yacht Haven boatyard as it existed in on or about 1990. The reasons for this are:

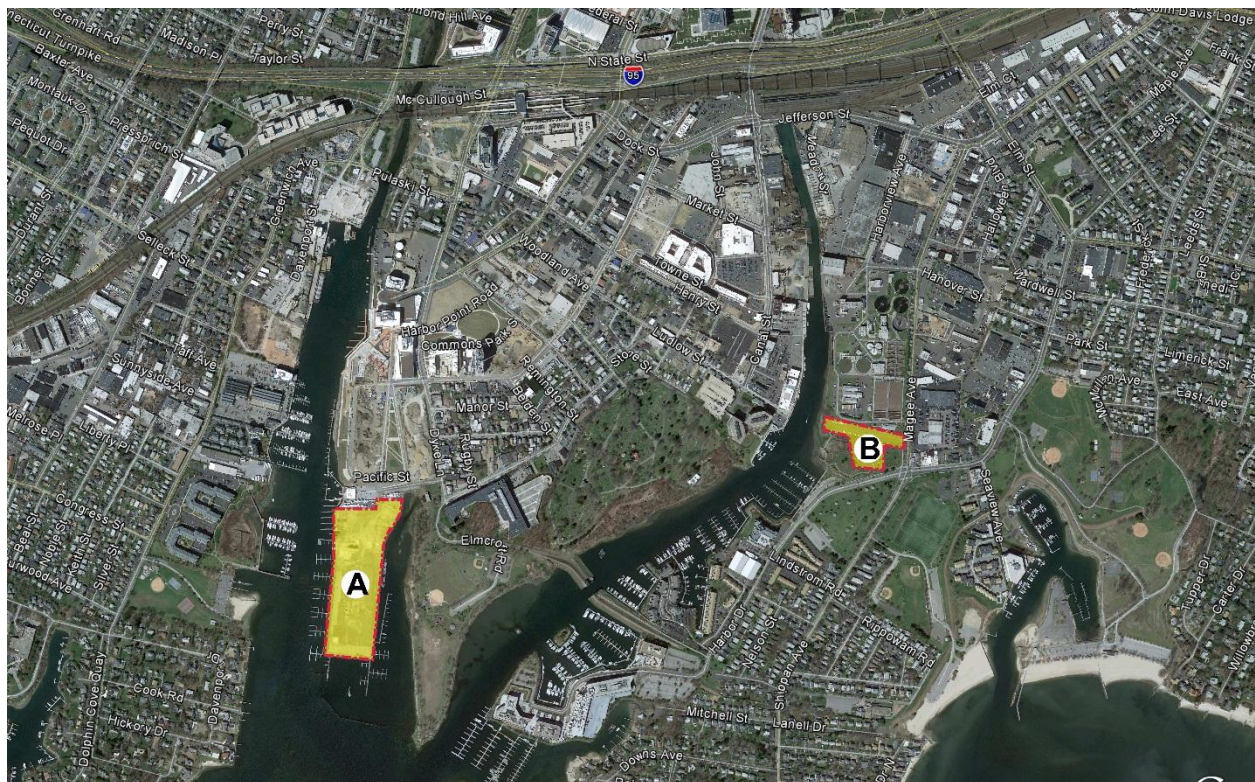
- This is a time representative of the general operations of the boatyard and from which there was not much change in its operation and condition.
- There is documentation on the assets and operations of the facility at that time

This report does not include a comparative evaluation against the existing conditions of the site as it is today, nor does it include an evaluation of the current or future maritime needs of the Stamford and Connecticut area. As such, this report does not include a market study to establish current or future potential demands for marina or boatyard facilities.

Very specifically, this is a targeted study to evaluate, one-on-one, what is being proposed to what was in the boatyard on or about 1990 to assess whether the former boatyard and marina services have been reduced or displaced.

The Yacht Haven property, labeled as Site A in Figure 1.3 below, is at the tip of the peninsula surrounded by navigable water on three sides and direct access to Stamford Harbor. The 205 Magee property is designated as site B, and is located along the East Branch of the Harbor.

Figure 1.3 – Location of facilities



SECTION 2

COMPARABLE METRICS

In order to evaluate the two facilities, the second question was to establish the metrics to be used in the comparison. The metrics must by definition be indicative of the capacities and types of operational activities that take place in one facility versus the other and must be quantifiable and measurable.

Some of the metrics and activities are singular in nature; that is to say that they provide a particular use, and whether or not that use is provided in the other is a straight comparison. Some of the comparisons involve multiple operations that must be sequentially evaluated to compare the capacity of a shipyard with the other. The capacity is then limited by its weakest common denominator. In the case of a boat repair facility, it includes the lifting capacity, yard capacity, and the different capacities for storage and repair space. Those are evaluated subsequently in the report.

The following metrics are the ones that can be used to compare the different components of each boatyard. Subsequently these can be summarized in establishing a percent of capacity that the 205 Magee proposal compares with Yacht Haven.

1. Wet slips
 - a. The total amount of wet slips by size
 - b. Total Lineal Feet of dock space
2. Dry boat storage
 - a. Total amount of boats and size that are able to be housed in the facility
 - b. Total amount of area dedicated to boat storage
3. Maintenance and repair areas
 - a. Total usable square feet of yard area used for boat maintenance and repair
 - b. Square feet of enclosed repair sheds
 - c. Square feet of enclosed painting sheds
 - d. General number of vessels able to be serviced at one time.
4. Support buildings and functions
 - a. Square feet of other buildings by use
 - b. Any specific attributes of a building
 - c. Fueling facility
5. Lifting capacity
 - a. Equipment dedicated for hauling boats in and out
 - b. Equipment and method used to transport boats on the property

- c. Number and capacity of boat lifts
 - d. Number of positions used for lifting boats
 - e. Boat ramps
 - f. Supporting service docks for the in/out operation
- 6. Parking
- 7. Access channel
 - a. Width
 - b. Depth
 - c. Distance to open water
- 8. Other uses of the land for open space, buffer and circulation
 - a. Efficiency of site dedicated to boatyard
 - b. Circulation - Amount of area dedicated for circulation

SECTION 3

THE YACHT HAVEN FACILITY

The use and development of the Yacht Haven facility, has varied over time. At one point it was a highly used boatyard area that included many of the functioning necessities for both wet/dry storage, boat repair and other activities.

As compared to the empty state of the property today, the following three aerial photographs (Figures 3.1, 3.2 and 3.3) provide a snap shot of the boatyard at different times in 1998, 2005, and 2011 respectively – each with different distinct uses/occupancies. These occupancies varied with the seasonal variations associated with in-water vs. out-of-water storage of vessels.

Since the exact month that these photographs were taken are unknown, they are presented as illustrative only to convey the intensity, capacity and use of the facility at any point in time. This is particular important due to the current state of the facility today.

Figure 3.1 - Aerial photograph 1998



Figure 3.2 - Aerial photograph 2005



Observations of these photographs, as well as other historic documents show:

- During this period of time the facility was being heavily used.
- Variations in both wet and dry slip occupancies are due to the seasonality changes. The facility provided for boats to be in the water until winter, when they would be pulled for storage on land.
- According to certain reports, the uplands would be used for multiple activities during the summer.
- The facility had a heavy use by sailboats

Figure 3.3 - Aerial photograph 2011



Since the period of 1990 was the one chosen by the City as the comparable period to be used for this analysis, a document exists that clearly inventoried the buildings, sizes and uses that the facility had at that time. The document showing this information is shown in Figure 3.4. Although difficult to read in the format of this report Figure 3.5 shows a close up of the detailed quantities that were inventoried at the time.

[illegible]

All of this information was then used to create a master inventory of all uses and that is shown in Figure 3.6 and in Table 3.1.

Figure 3.5 – Close up of inventory of Yacht Haven -1990

YACHT HAVEN PROGRAM

1. Boat Yard Upland Areas	
a. Building Compound (work area including building footprints)	6.0 ac.
b. Work Stand Area outdoor	.85 ac.
c. Upland Storage (winter) Outdoor	8.35 ac. 412 boats
d. Lumber Yard Storage	30' X 50'
e. Onsite Parking (employees only) Summer	70 cars
f. Cradle Storage	.4 ac.
g. Indoor Mast Storage	7,000 sf.
h. Misc. Indoor Storage	sf. =

Total Boat Yard Upland Area = 14 acres

2. Water Frontage Utilized	260 lf.
3. Boat Yard Buildings	
a. Administration	3,360 sf.
b. Work Shed	
1) Footprint	16,400 sf.
2) Rigging, Storage & Parts	1,200 sf.
c. Finishing Building	2,800 sf.
d. Winter Storage Shed	
1) Footprint	28,800 sf
2) Mezzanine Space Available	
e. Mast Storage	7,000 sf.
f. Dock Managers & Marine Service	1,760 sf.

Total Building Area = 59,160 sq.ft.

4. Retail/Service Buildings	
a. Electra Yacht	2,135 sf.
b. Marine Diesel	2,135 sf.
c. NE Yacht Brokers	1,240 sf.
e. Marine Police	1,600 sf.
f. U.S. Coast Guard Auxilliary	260 sf.
g. McDonald Rigging	
1) Indoor	3,640 sf.
2) Outdoor	
3) Docks	
h. Ships Store	900 sf.
Total Retail/Service Buildings	11,910 sq.ft.

5. Boat Slips and Storage Capacity	
a. Slip Rentals	
1) Summer Rentals	251 slips 10,065 lf.
2) Wet Winter Rental	109 slips 4,000 lf.
b. Work Docks	1,310 lf.
c. Fuel Docks	260 lf.
d. Rigging Docks	150 lf.

e. Managed Boat Slips

Total Boat Slips
& In-Water
Storage Capacity = 11,785 lin. ft.

Figure 3.6 – Inventory of Yacht Haven as of 1990



A larger version of this drawing is included in the appendix. The numbers in the circles are the index numbers as referred to in Table 3.1.

Table 3.1 YACHT HAVEN WEST SITE INVENTORY - 1990		
1	Total Dry Land Area	605,048.04 s.f.
LAND SUBDIVISION		
2	Roadways	0
3	Green Space and Buffer	N/A
4	(A) Painting yard	6,723 s.f.
	(B) Boat Repair Yard	16,133 s.f.
	(C) Boat storage yard area	267,068 s.f.
	(D) Circulation	257,164 s.f.
	Number of Boats on land	Approx. 400 (summer) 500 (winter)
5	Building Foot Print	57,960 s.f.
6	Parking area	Located throughout the site
	Number of Parking Spaces	40 to 200
7	Total Underwater Area Controlled	22 acres
BUILDINGS		
8	Boat Storage / Repairs	15,646 s.f.
9	Painting / Repair Shops	3,108 s.f.
10	Offices	2,268 s.f.
11	Rigging Shop / Other shop	6,901 s.f.
12	Restrooms	997 s.f.
13	General Storage	29,040 s.f.
THIRD PARTIES		
14	Yacht Club	N/A
EQUIPMENT (NUMBER & SIZES)		
15	Yard Cranes	1 – 35 ton
16	Trailers	2
17	Travel Lift	2 (60 and 30 tons)
18	Forklifts	2
WET SLIPS (NUMBER OF SLIPS SUBDIVIDED)		
19	Under 20'	0
20	20' to 30'	58
21	30'to 40'	122
22	40' to 50'	23
23	Over 50'	48
ANCILLARY FACILITIES		
24	Fueling (Tank Capacity)	6,000 gal gas 5,000 gal. diesel
25	Ramps	0
OTHER LAND USES		
26	none	0

SECTION 4

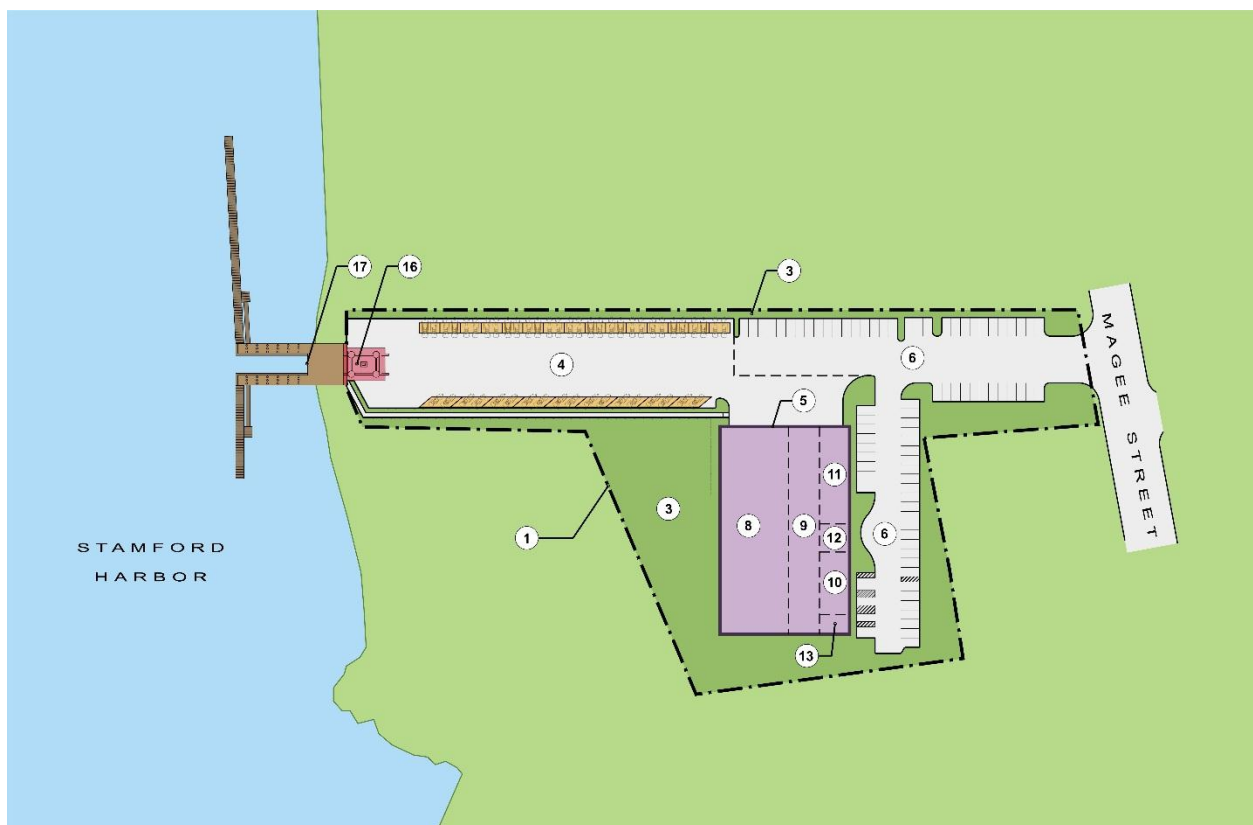
205 MAGEE AVENUE MARINA PROPOSAL

205 Magee Avenue is the proposed boatyard which has been submitted to the City. The information used herein has been provided to B&A by the City from the applications that have been made.

The drawings provided in the application did not include details for many of the activities within the site or within the building. These drawings were digitized and compared to the write-up given to the City. The resulting inventory shown in Figure 4.1 includes a similar take-off of areas and spaces as was done for the Yacht Haven site.

The general characteristics of the site are also summarized in Table 4.1.

Figure 4.1 – General characteristics of 205 Magee Avenue proposal



A larger version of this drawing is included in the appendix. The numbering on the drawings are indexed against Table 4.1.

Table 4.1 PROPOSED STAMFORD BOATWORKS INVENTORY		
1	Total Dry Land Area	153,507 s.f.
LAND SUBDIVISION		
2	Roadways	0
3	Green Space and Buffer	56,122 s.f.
4	Boat Repair Yard / Boat Storage Yard	37,163 s.f.
	Number of Racks @ 4 Boats High	48
	Total number of boats (racks)	192
5	Building Foot Print	25,000 s.f.
6	Parking	35,222 s.f.
	Number of Parking Spaces	82
7	Total Underwater Area Controlled	0
BUILDINGS		
8	Boat Storage / Repairs	13,000 s.f.
9	Painting / Repair Shops	6,000 s.f.
10	Offices	1,600 s.f.
11	Rigging Shop	3,000 s.f.
12	Restrooms	800 s.f.
13	General Storage	600 s.f.
THIRD PARTIES		
14	Yacht Club	N/A
EQUIPMENT (NUMBER & SIZES)		
15	Yard Cranes	0
16	In and Out Cranes	1 shown on plans
17	Lifts (Travel Lift)	1
18	Forklifts	1
WET SLIPS		
19	Under 20'	No information provided, other than a note stating that wet slips would be retained at the current site.
20	20' to 30'	
21	30'to 40'	
22	40' to 50'	
23	Over 50'	
ANCILLARY FACILITIES		
24	Fueling (Tank Capacity)	0
25	Ramps	0

SECTION 5

COMPARISON OF TWO FACILITIES

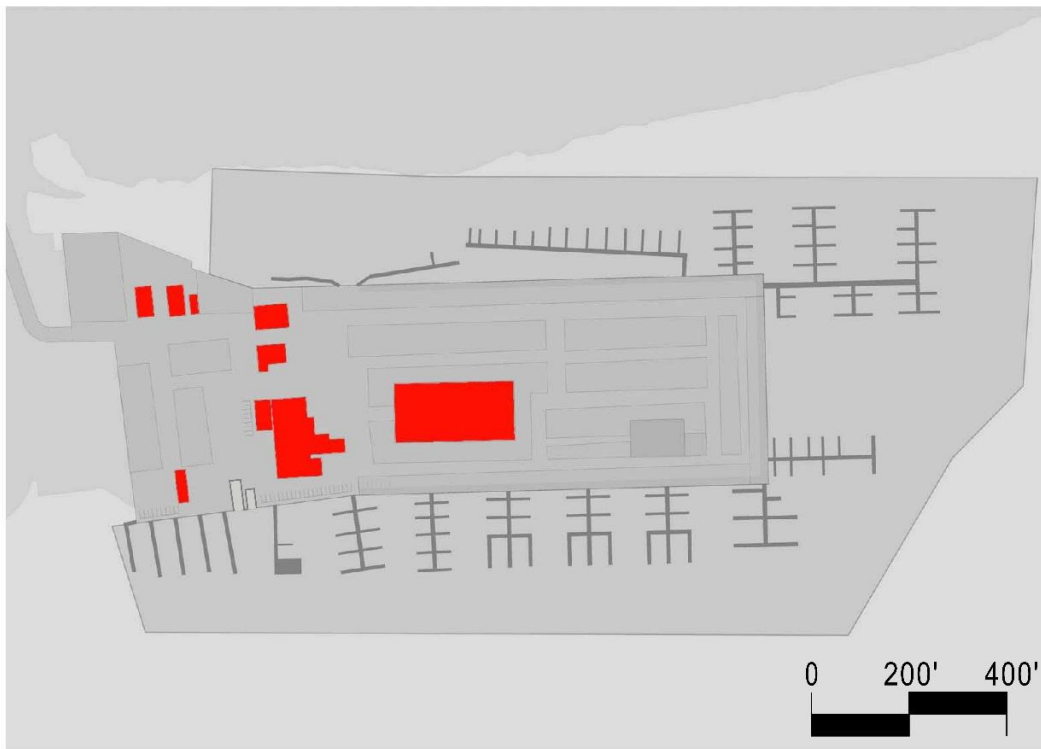
In order to fairly compare the assets and offerings of both facilities, it is important to understand how the proposed workings of each plan differ. It is clearly obvious from the onset, the vast difference in site area for each and as such to understand capacities it requires a more in-depth evaluation. Issues, such as site efficiencies, and capacity requires that a more detailed look be done to compare each plan.

A comparison of the different metrics listed in Section 2 of this report of each site has been undertaken. This allows us to calculate the actual number of boats and services that each plan provides vs. the other.

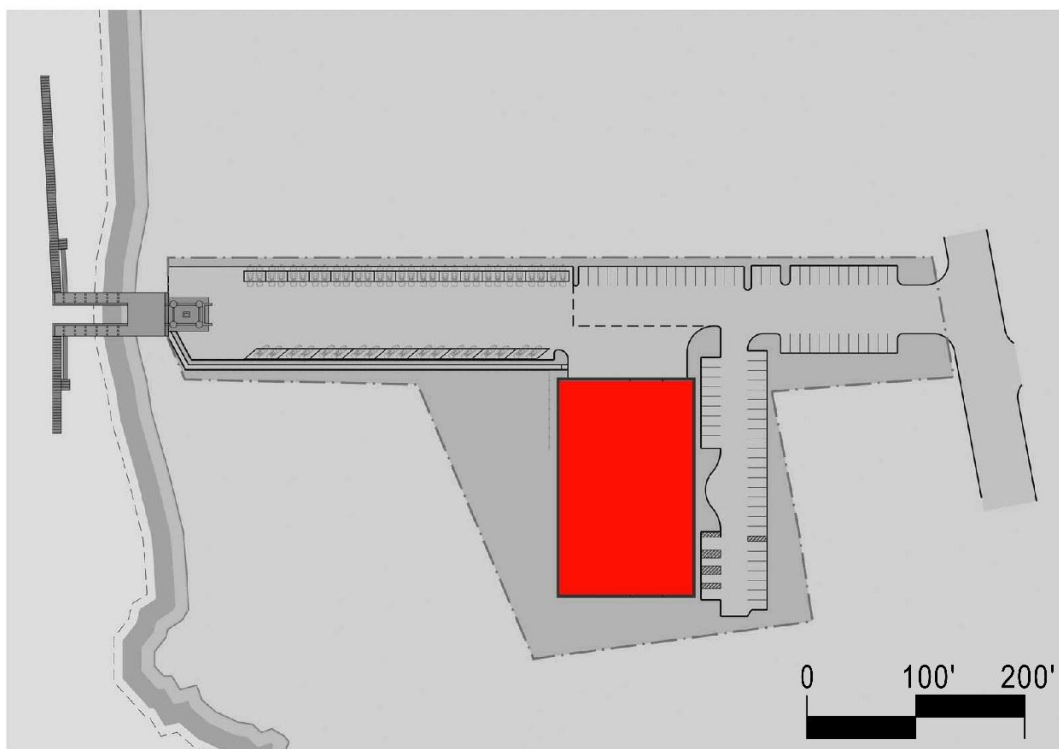
Both site plans were digitized in order to have an accurate representation of each and allow a direct comparison with sufficient accuracy to provide this analysis. Because, we did not have access to digital drawings, every effort was made to correctly scale the drawings based on the paper drawings available, as such the accuracy of these measurements, although not exact are of sufficient for this evaluation.

A number of graphics are shown in Figures 5.1 through 5.5 that illustrate the analysis of the areas dedicated for different uses to make sure that each plan is properly reflected. By doing this type of analysis, it accurately allows to compare the capacities of each. For example, although the yard in Yacht Haven is much larger than 205 Magee, it also has a lot of area allocated to driveways and circulation.

Figure 5.1 – Areas dedicated to buildings



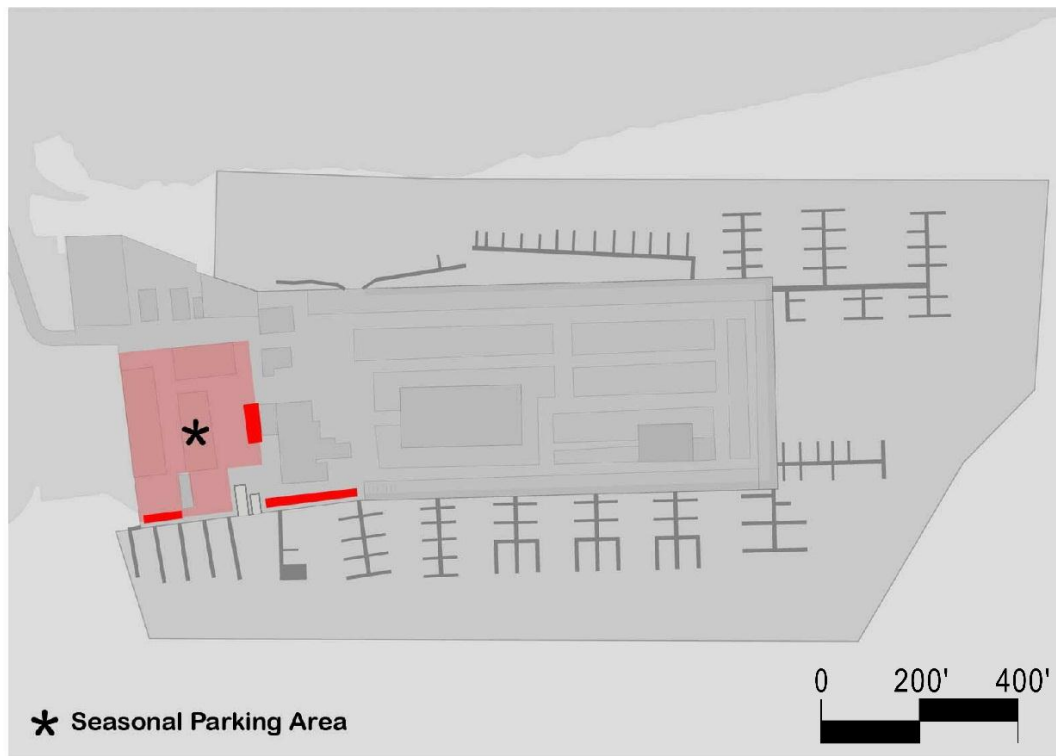
YACHT HAVEN WEST SITE



STAMFORD BOATWORKS

BUILDINGS

Figure 5.2 – Areas dedicated to parking



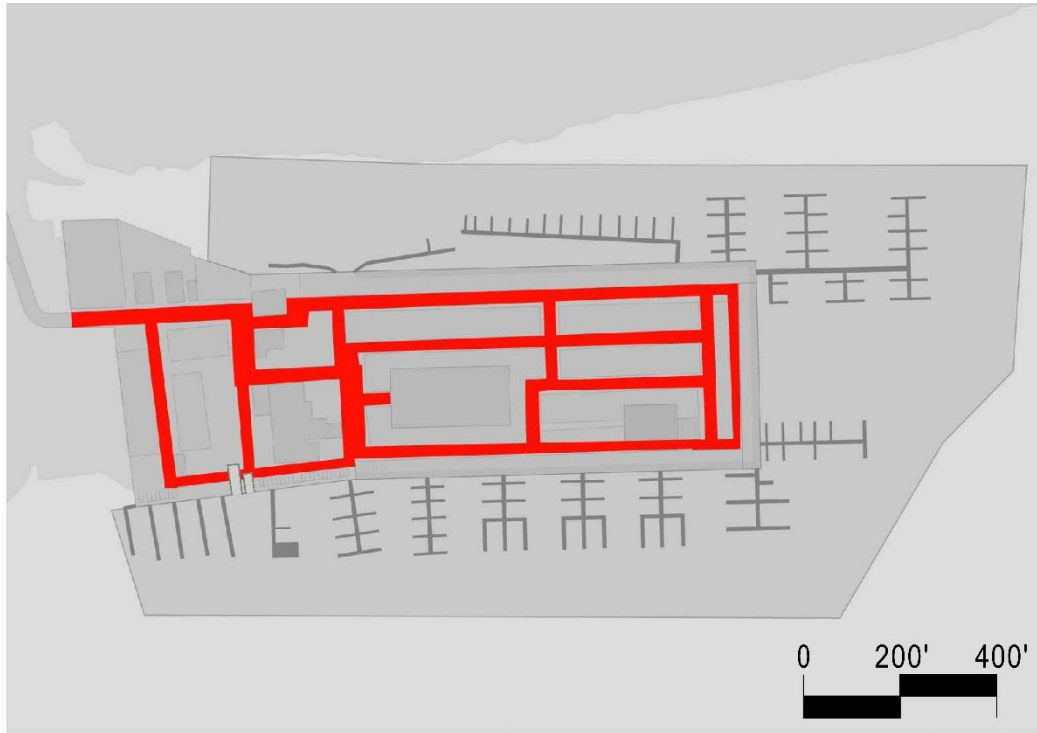
YACHT HAVEN WEST SITE



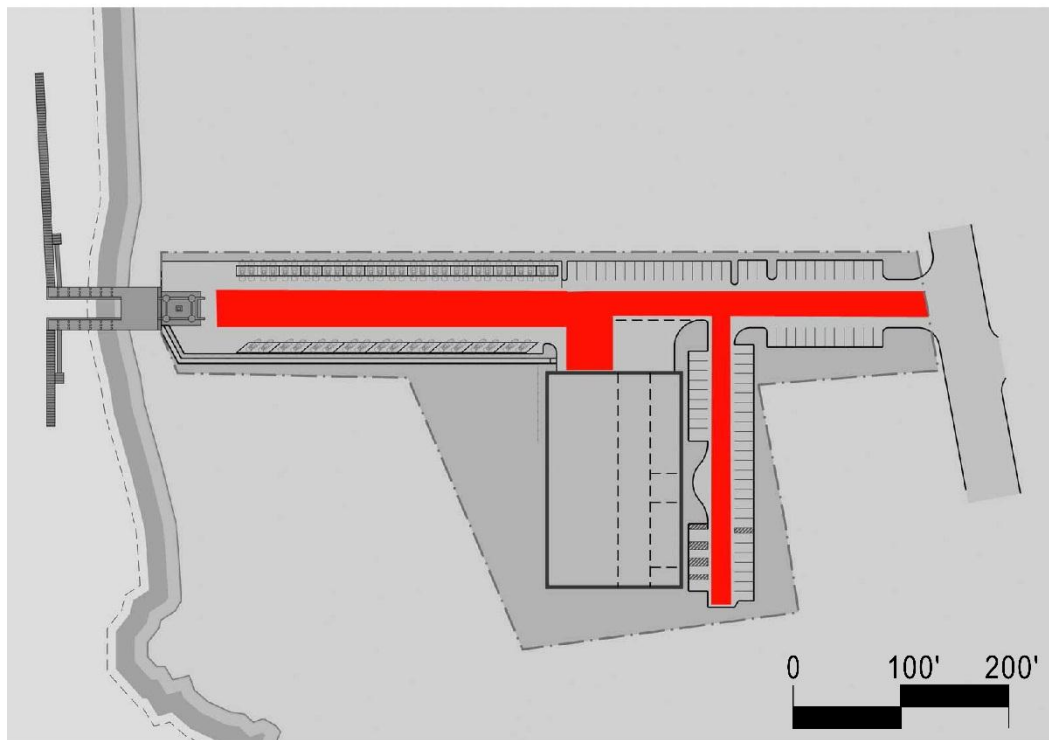
STAMFORD BOATWORKS

PARKING

Figure 5.3 – Areas dedicated to circulation



YACHT HAVEN WEST SITE



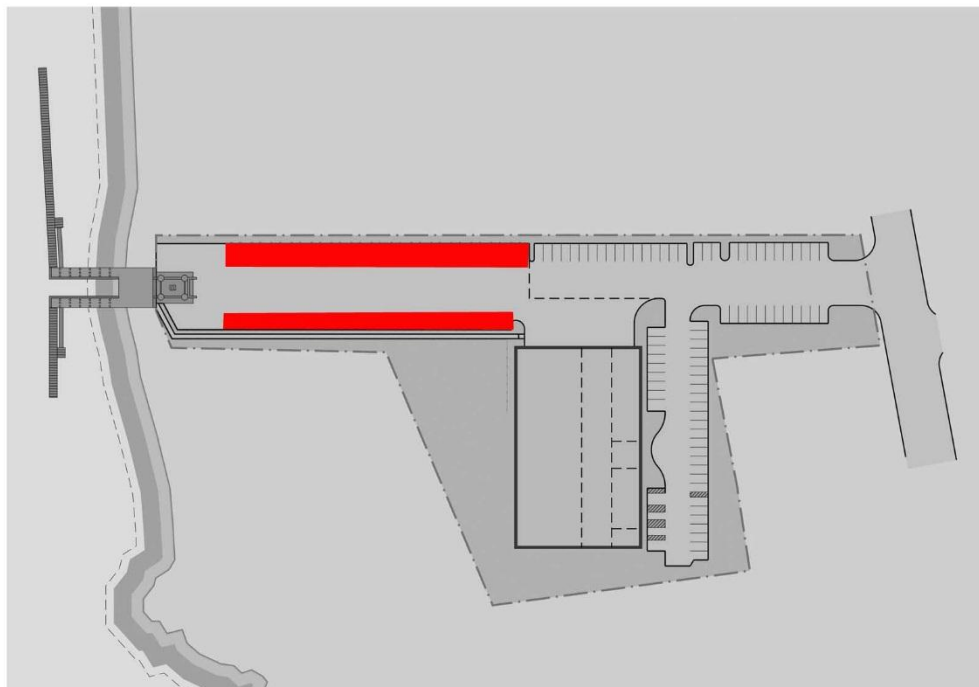
STAMFORD BOATWORKS

CIRCULATION

Figure 5.4 – Areas dedicated to ground boat storage or repair



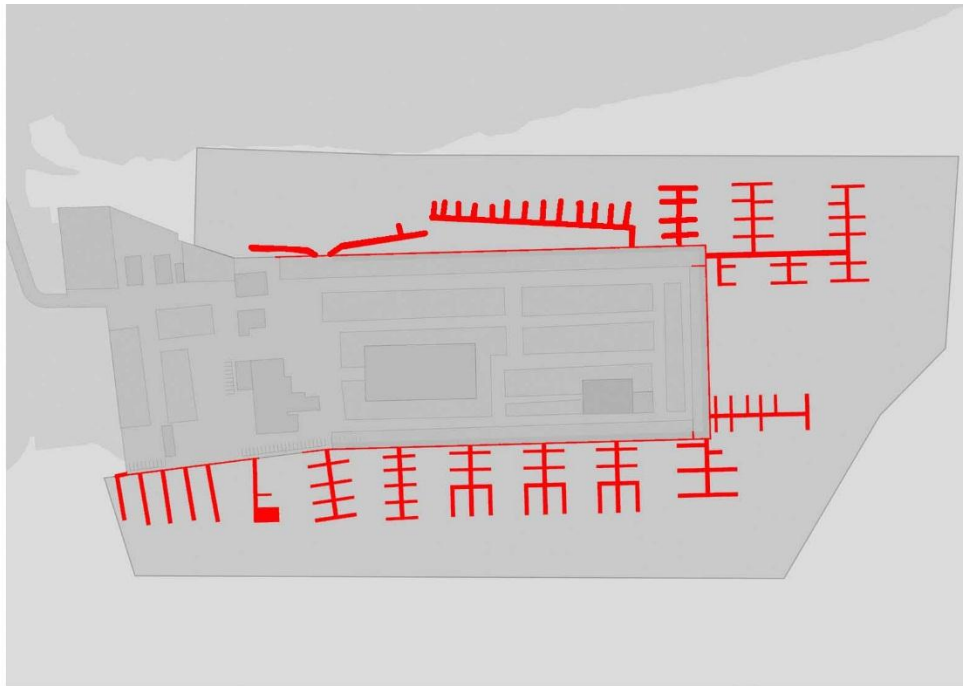
YACHT HAVEN WEST SITE



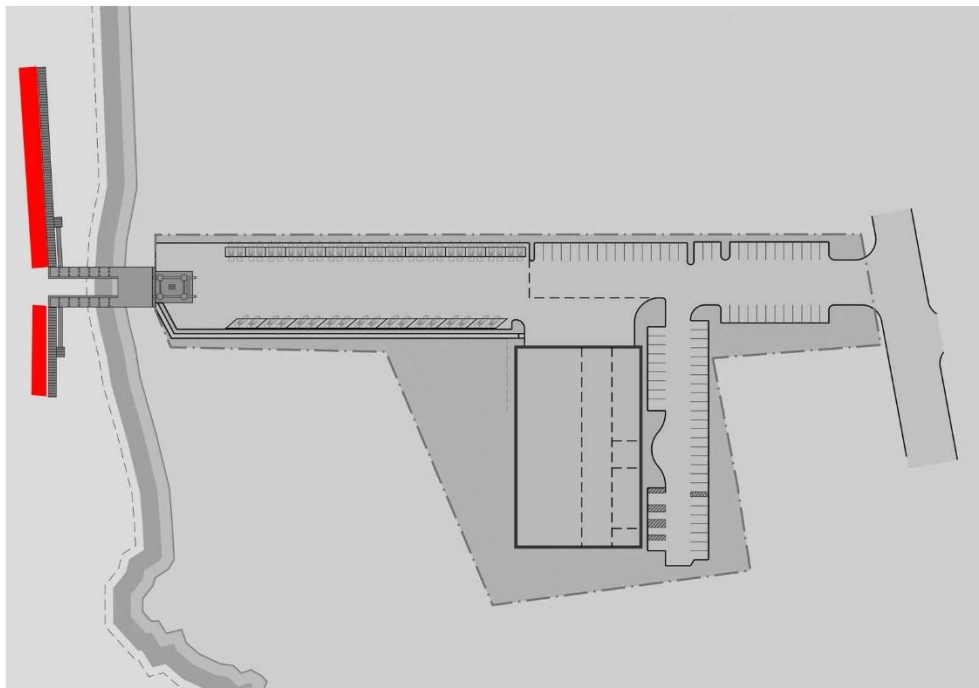
STAMFORD BOATWORKS

DRY STORAGE

Figure 5.5 – In water docks



YACHT HAVEN WEST SITE



STAMFORD BOATWORKS

DOCKS

Based on the above the following comparisons can be drawn for each site:

❖ **Metric 1 - Wet slip berthing capacity**

Yacht Haven - The wet slips provided at Yacht Haven represent a total of 11,783 lineal feet of berthing space. This is broken down into 10,065 feet of slips for rent, 1,310 lineal feet of work docks, 260 lineal feet of fuel dock and 150 lineal feet of rigging docks. There is a total of 251 wet slips ranging from 20 feet in length to over 50 feet. The actual breakdown of slips by length is shown in Table 3.1.

205 Magee - There are no wet slips provided at the 205 Magee property, but a footnote in the comparisons table provided by the applicant indicates that “Marina remains at Bridgewater”. Since no further information has been provided to us as to that part of the work no further evaluation can take place on this issue.

Having the wet slips and dry slips separated in two separate locations is not uncommon, but does represent a less efficient operation than existed at Yacht Haven where boats can move from one type of slip to the other in the same location.

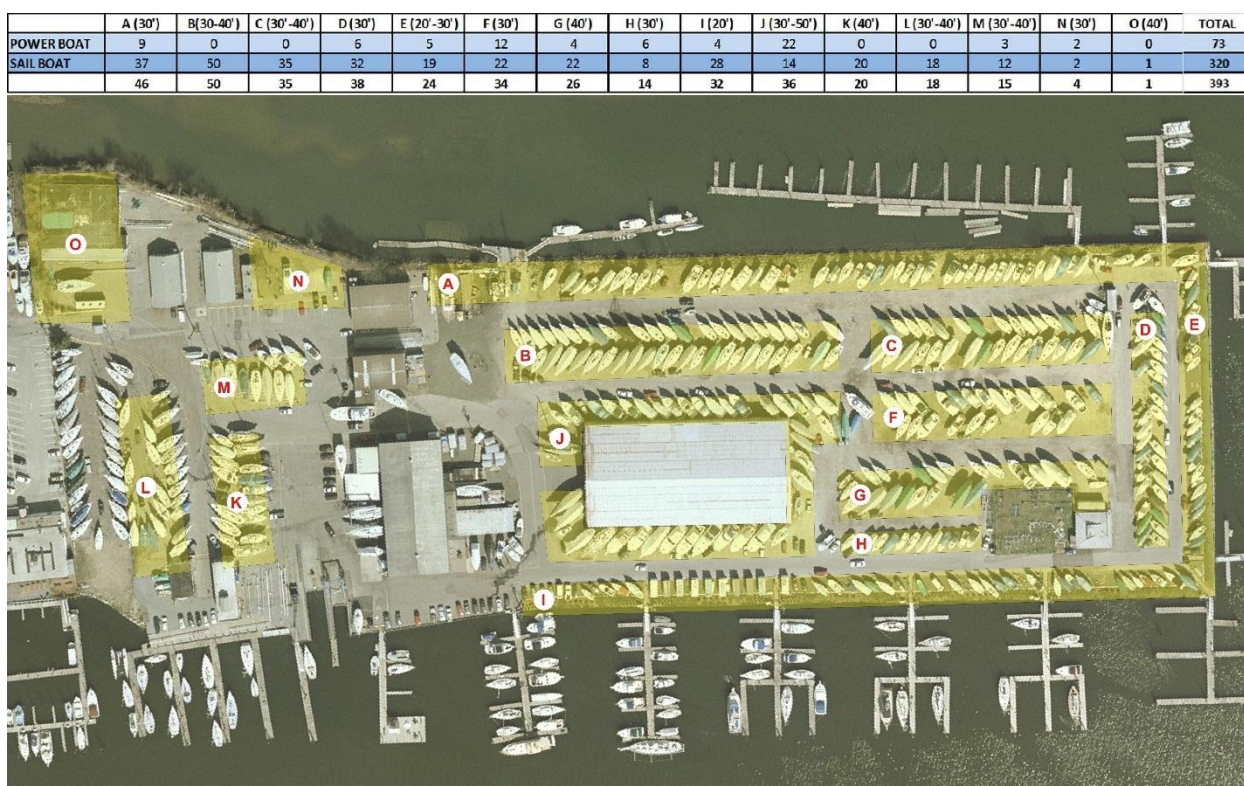
❖ **Metric 2 - Dry boat storage**

Yacht Haven - The Yacht Haven facility had the ability to store over 400 boats during the summer and over 500 boats in the winter all on surface area, with boats ranging in size from the very small to greater than 50 feet. Since the site is used differently during parts of the year, we have analyzed certain of the aerial photographs, digitized and measure the number and size of boats kept in storage. This is shown in Figure 5.6 below. The aerial photograph shown in the Figure is from 1998. The actual capacity of the site in this aerial, its size and location of structures is the same as those in 1990, and as such the capacity for storage is the same. A similar comparison using the aerials from other periods show the same characteristics and number of boats in the yard.

The actual boats stored were counted in areas clearly showing boats not being worked on. The yard areas that are predominately associated with boat repair facility have not been counted.

The review of this data shows that on that day there were 393 boats in storage. This compares favorably with the 400 boat storage capacity previously discussed. It is important to note that 88% of the boats are greater than 30 feet, and 81% of the boats were sailboats. We chose the 30 feet length metric, because that is the number mentioned in the application as the capacity of the proposed 205 Magee Avenue racks.

Figure 5.6 – Boats in storage at Yacht Haven by size and category



A larger version of this drawing is included in the appendix.

205 Magee – According to the application and drawings, the 205 Magee proposal has the ability to store up to 192 boats in racks – stacked 4 high. These can easily be seen on the plan provided. In the Coastal application, section 3.2 the applicant indicates that the boats will be up to approximately 30 feet in length. The applicant also indicates the use of a forklift to load and launch the boats.

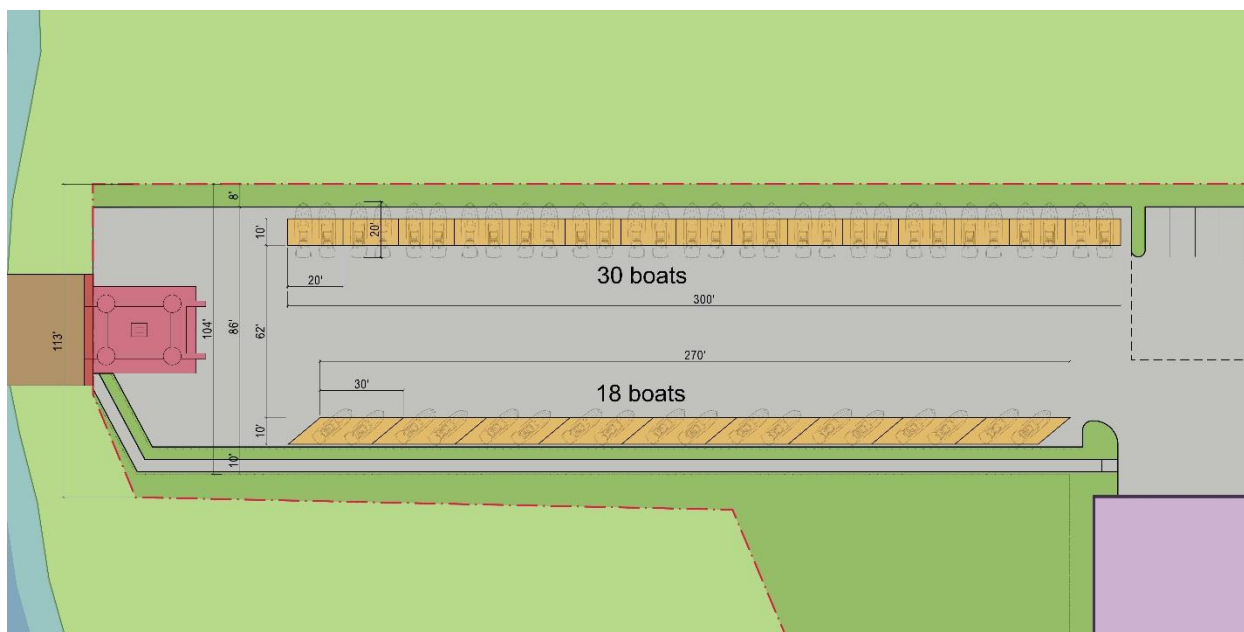
Because the drawing provided did show any dimensions, we have digitized the proposal so that we can determine the areas and review the amount of boats that can be stored. This drawing with the approximate dimensions of the yard area is shown in Figure 5.7 and is included in the appendix in a larger format.

The plan provides a central launching and retrieval slip with travel lift and fork-lift launch capabilities. This layout can be very efficient to run and operate as a storage facility. Boats on the racks will use the forklift which requires a central fairway for maneuvering of the forklift(s). Forklifts will require an area twice the boat length in order to maneuver, and usually a minimum of 60 feet wide fairway is recommended. This area must be kept clear of obstructions and as such cannot be considered for any on surface storage while the racks are in use.

By scaling the plan, looking at the surveys provided and looking at the available dimensions of the property the boats as shown on the drawings are closer to 20 feet in

length than 30 feet. Even by angling the boats on the southernmost rack without any additional drawings, it cannot be ascertained if 30 foot boats will be possible to store.

Figure 5.7 – Blow up of boat storage area



There is no information provided as to how bigger boats could be stored and stacked considering the width of the property at this location.

Therefore since the Yacht Haven property had most of the boats in storage in excess of 30 feet, and the drawings are not clearly dimensioned, we suggest that this information be provided so that this issue can be studied further.

The note on the plan provided by the applicant also indicates the ability to store up to 292 boats of unspecified size in the winter. No location is shown, other than the repair shed also has the note that the facility can be used for storage. To store an additional 100 boats on the site, with an average of 400 square feet per boat, would require an additional 40,000 square feet of surface area. This would mean that the building, and areas of either the yard or parking would be used for storage. Without a plan it is hard to understand where such storage can occur, and if it does, then where will repair operations be located during this period.

Of note is that the dry-storage is predominately in racks. Racks are highly limited for sailboats even with masts removed. Since this is a significant component of the Yacht Haven business this concept needs clarification, as both the size and types of vessels to be stored will be highly constrained.

• Metric 3 - Boat repair capacity

The comparable boat repair capacity for this analysis is mostly based on amount of space and area allocated for this use on either boatyard. Although to a certain degree layout and flow also have a relationship to capacity, the major component in comparing the two can be measured by areas.

Yacht Haven - The Yacht Haven boat maintenance and repair operation occurred in four major different physical parts of the boatyard:

- **Dedicated shops** - the first was the shops dedicated to mechanical, electrical, painting and others maintenance activities. These are all listed and quantified in Table 3.1
- **Yard area** – a certain amount of space around the shops were used for outdoor maintenance work. Ascertaining the amount space has been done by studying the aerial photographs of the site, and an allocation of area has been made for this use; this is shown in Figure 5.8. This drawing is also included in a larger format in the appendix. The areas shown in pink are those allocated to maintenance; while those in yellow are storage. It is important to note that the space allocated for this use in this analysis is not included in the area assigned for storage previously; it has been segregated and not double counted.

Figure 5.8 – Yard area allocated for outside maintenance



- **In water docks** – as previously stated in the wet slip discussion approximately 1,310 lineal feet of work docks and 150 lineal feet of rigging docks were provided.
- **In the storage area** – as with other similar boatyards, owners provided certain maintenance to their boats while stored on the cradles sitting on the storage yards. Activities such as bottom work, light painting and other common maintenance activities were allowed.

205 Magee –Viewing the 205 Magee project in a similar way, we note the following:

- **Dedicated shops** – The layout of the 205 Magee repair shed in the drawings submitted indicate the right to further change the plan. The plan presented has very comparable fixed maintenance areas for the repair building. The work shed areas listed in the proposal are similar to those that were at Yacht Haven. The major difference is in the fact that at Yacht Haven there were separate structures for distinct uses, while at 205 Magee they are all within the same structure. This is now more common, and both models can work, as long as the building is properly designed with sufficient space for moving of boats and allocating shop area for different uses. Noxious uses such as a paint shop will require the appropriate paint booths and ventilation. Very little information is provided in the proposal as to the internal design of the building. A drawing shows the space subdivided into several basic uses, but the drawing indicates the right to be able to change such design. As such detailed comments on the capacity and capabilities are premature at this time. Certain items will become self-evident with further design, such as the very narrow nature of the paint area.
- **Yard area** – The plans provided by the applicant are silent as to the allocation of outdoor space for on-going maintenance and support to the shops inside the building. A review of the plan however, shows that little space is for outdoor maintenance and staging. The vast amount of outdoor space is dedicated for parking, boat racks, or the main aisle for forklift maneuvering and traffic. Without an outside work space, the internal workings of a repair shed are highly compromised as there will not be space to stage boats.
- **In water docks** – there is no designated in water work docks in the plan
- **In the storage area** – because of the rack design for the dry boat storage, there is no designated space to accomplish any light maintenance and repair of boats in the yard.

• **Metric 4 – Support buildings and functions**

Support buildings are those ancillary buildings and or spaces that are necessary for the boatyard to properly function. A comparison of the attributes of each plan is as follows:

Yacht Haven – The Yacht Haven support buildings or spaces included the following:

- Offices – 2,268 square feet

- Restrooms – 997 square feet
- Retail – 11,910 square feet
- Fuel dock

205 Magee - The 205 Magee plan shows the following:

- Offices – 1,600 square feet
- Restrooms – 800 square feet
- Retail – 0
- No fuel dock – the proposal is silent as to whether fuelling will be retained at the Yacht Haven site

❖ **Metric 5 – Lifting capacity**

Lifting capacity is a key component of any maintenance and repair yard. Lifting is needed for both repair works and for launching and retrieving boats that are stored on land. Lifting capacity can also be limited by the launching piers and the supporting docks to hold the boats pre or post launch. According to research, on a good day 15 boats were launched at Yacht Haven.

Lifting capacity should be matched to the yard capacity and the boat size in the market. However in this case we are comparing the assets of the two facilities

Yacht Haven – The Yacht Haven facility relied on the following equipment for lifting:

- 1 – 70 ton travel lift
- 1 – 35 ton travel lift
- 2 travel lift slipways the larger with 60 feet in length
- 1 - 30 ton crane
- 2 forklifts
- 2 hydraulic trailers with tractors

205 Magee – the proposal for 205 Magee calls the same combination of equipment but with different configurations, they include:

- 1 – 60 ton travel lift
- 1 combined travel lift and forklift slipway 40 feet in length
- 1 crane of undesignated capacity
- Forklifts (unknown amount)
- The travel lift pit is 40 feet long, limiting the size of vessels that can be hauled.
- Service docks – a discrepancy exists between the drawings and the application report – the notes on the drawings say one 90 feet long pier and a second 200 feet long pier for a total of 290 feet of support pier; while the application (Section 3.3, page 4) indicates one 90 feet long pier and a 100 feet long pier. However, based on the graphic scale of the drawing provided, none of these match – using the graphic scale, the drawings show approximately a 130 feet long pier and a 60

feet long pier for a total of 190 feet of pier. We believe the graphic scale is not correct.

A comparison shows a distinct difference between the two, however, since all of the boats in the racks are less than 30 feet, and not larger as was at Yacht Haven, the scheme shown, (once discrepancies can be clarified) would be sufficient for the size of the 205 Magee boatyard area, and number of boats that would be pulled and launched. It will require a higher level of coordination between boat owners and boatyard operator to make sure that boats are launched on demand and are moved off the service pier in a prescribed time. Depending on which length is correct, the service dock would be able to handle between 6 to 9 boats that have either just been launched or are waiting to be hauled in. However, there is no room to have any in-water repair work at these piers.

❖ **Metric 6 – Parking**

Yacht Haven – Yacht Haven had an area reserved with approximately 40 parking spaces, but cars could park at multiple areas as such the site could accommodate over 200 vehicles.

Comparing the 251 wet slip capacity of Yacht Haven to the 200 parking capacity equates to a parking ratio provided is one space for every 1.25 boats.

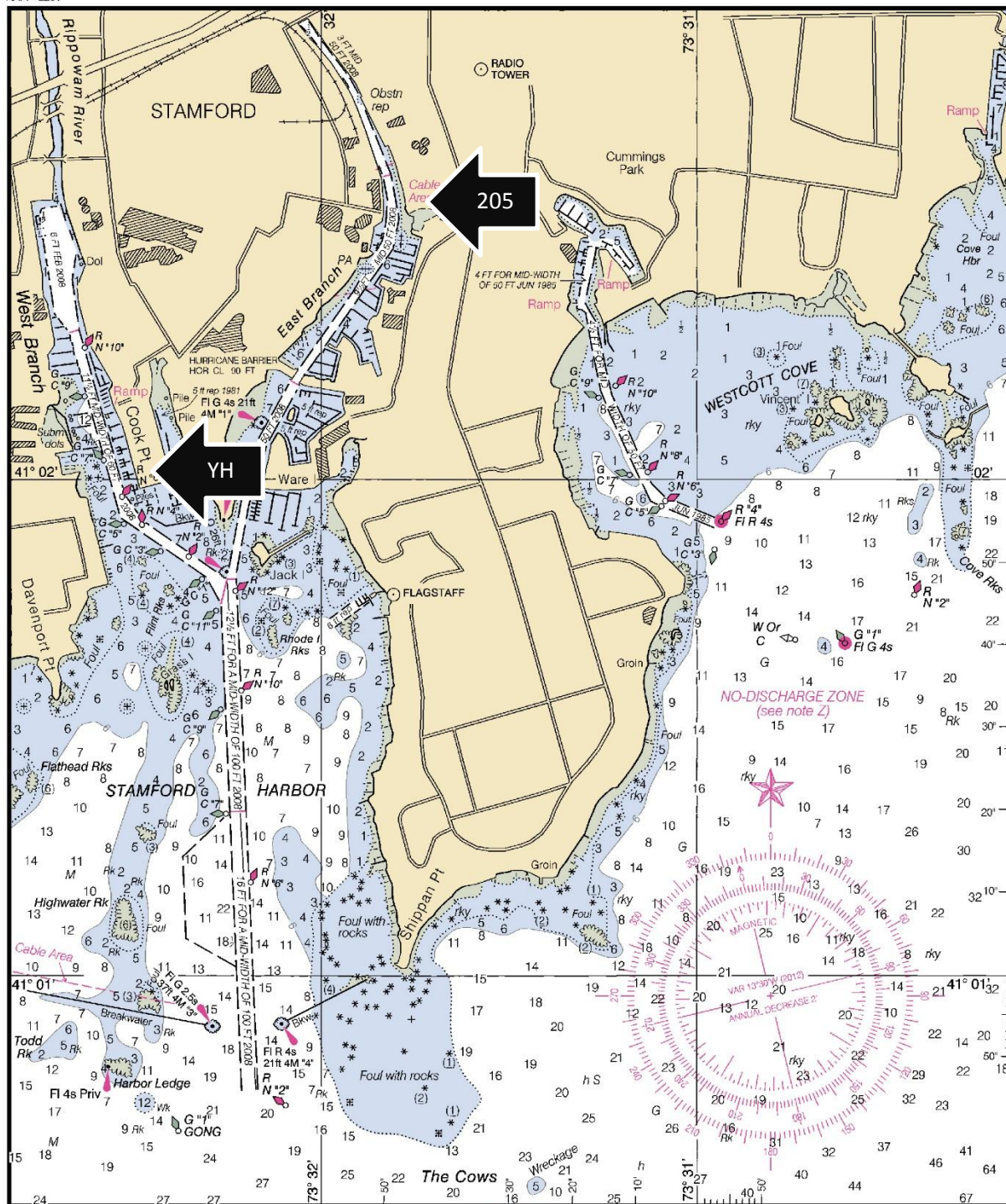
205 Magee – The 205 Magee site according to the drawings provided has a fixed parking capacity of 84 spaces. This equates to 1 space for every 2.34 boats.

❖ **Metric 7 – Access channel**

One of the controlling factors for marina could be the navigation in and out of the site. Both sites reach the Stamford Harbor via navigable dredged channel with defined dimensions and controlling depths. The main channel chart is shown in Figure 5.9 and a further close-up is shown in Figure 5.10.

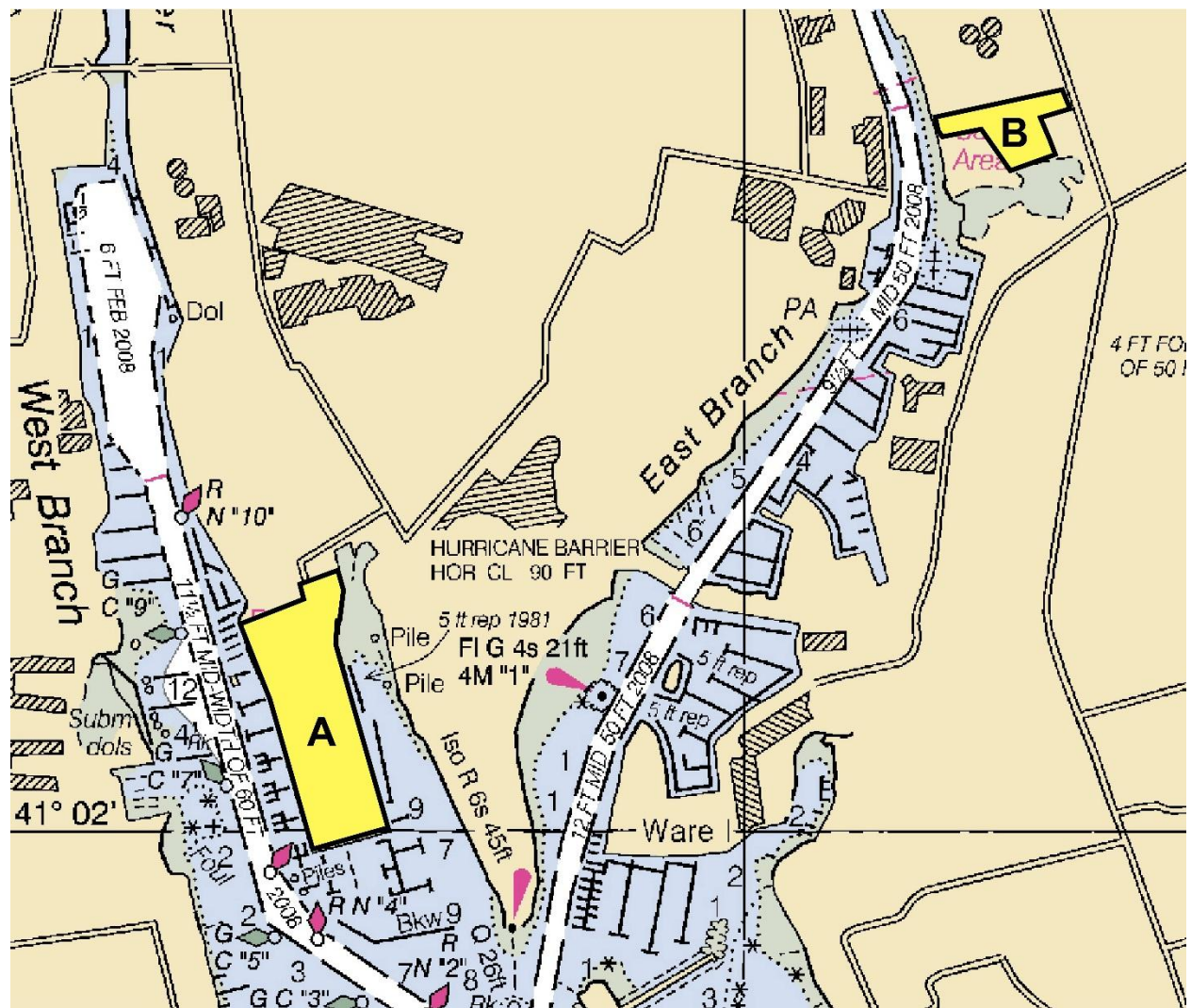
Figure 5.9 NOAA Chart 12364 – Stamford Harbor

KAPP 2201



INSET 7
SCALE 1:20,000
Nautical Miles

Figure 5.10 – Close-up of harbor Chart



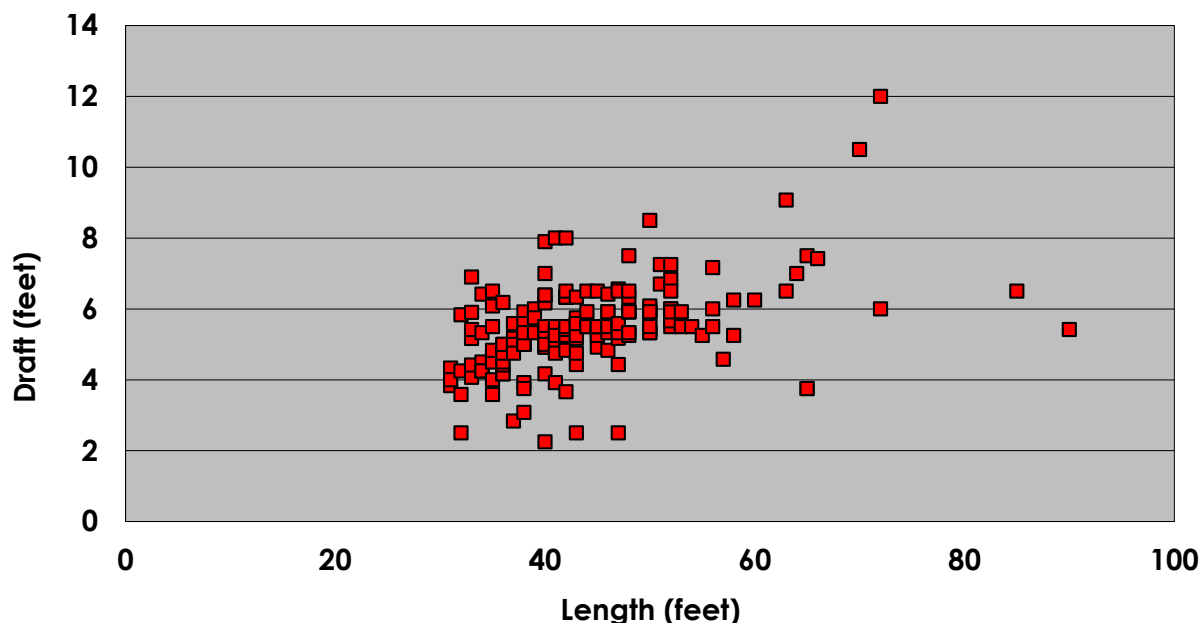
Yacht Haven – Access to the Yacht Haven wet slips are directly from the harbor. According to the NOAA navigation chart, access to the slipway is through the West Branch Channel which has a width a midpoint of 60 feet and a controlling depth of 11.5 feet. From the Y junction of the main channel to the location of the slipways is approximately half a mile.

205 Magee – The 205 Magee site is reached through the East Branch channel with has a controlling width of 50 feet and 12 feet of depth. The distance from the Y junction to the main channel is approximately one mile.

Both channels have sufficient depth to meet the needs of sailboats that have used Yacht Haven. Figure 5.11 shows draft of sailboats vs. length. As can be seen most sailboats

under 60 feet have drafts of less than 10 feet. Therefore both properties have channels deep enough.

Figure 5.11 – Draft of sailboats



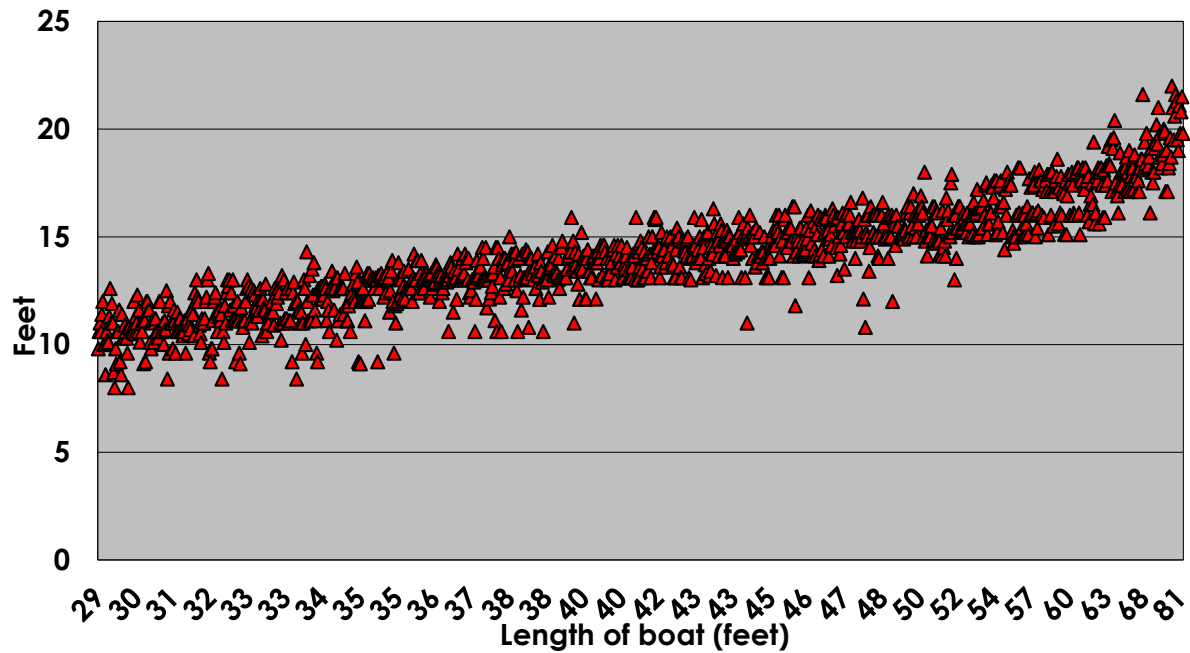
However, channel width is not equal. Good design practices indicates that an entrance channel for a marina should be either 5 times the boat beam or in some cases 75 feet. Figure 5.12 shows typical beams of most powerboats by size.

As can be seen from the chart, boats with 40 feet in length have an average beam of 15 feet, this would equate to a 75 foot wide channel. Boats in the 30 feet in length range have 12 feet beams which would equate to a 60 feet wide channel.

Therefore, comparing the two sites, the Yacht Haven channel with 60 feet of width was 80% of the target 75 feet design target for 40 feet long boats and 100% for 30 feet boats, while the 205 Magee is 66% of the target for 40 feet long boats and 83% for 30 feet boats.

Both channels have different characteristic in both the length of the navigation needed to reach the boatyard from the harbor and amount of other traffic generated by surrounding marinas and commercial users. The 205 Magee site is twice as far located from the main channel than the Yacht Have one, this could equate into more navigation restrictions and particularly this would restrict the channel to one-way traffic at times. In addition the East Branch has many more marinas, commercial traffic and barge traffic along the approach which would further complicate navigation to the site. The mixing of barge traffic on the channel is a significant difference between the two navigation schemes.

Figure 5.12 – Powerboat beams



The service dock at 205 Magee is stated to be off-set 20 feet from the channel. This is sufficient to keep the boats moored on the dock out of the channel limits, but the Corps will need to be consulted,

SECTION 6

SUMMARY AND FINDINGS

This section contains the summary of the analysis described in this report and provides a comparable matrix for both facilities. The best way to compare any significant difference between Yacht Haven and 205 Magee is to look at the percentage of the individual capacity of the site to provide marine and boatyard services and to store, service or repair yachts.

A comparison of the different land uses between the two sites is graphically shown in Figure 6.1 in the next page. This first figure is shown using different scales for each site for the sake of graphic representation. However, Figure 6.2 is the same drawing showing the two sites graphically compared at the exact same scale. This shows the vast differences in sizes of the sites.

A summary of the comparison of the major functions is listed below and shown in Table 6.1.

Wet slips – Yacht Haven can store 251 wet slips, while 205 Magee capacity is 0. The applicant needs to clarify the slips that they will leave at the Yacht Haven site and how they would operate before any further comparison can be made

Dry storage –

Summer storage - The Yacht Haven site can store approximately 400 boats, while 205 Magee can store 192 boats (both facilities can store more in the winter). A simple way to compare the two is a comparison of the two numbers in which case 205 Magee has 50% of the capacity of Yacht Haven, however, this is not a comparable analysis.

The majority of the boats stored at Yacht Haven are sailboats and were in excess of 30 feet in length. In fact, the yard could be used to store 100% of the boats above 30 feet if needed. However for a true comparison purposes we have used that 12% of the 400 boats at Yacht Haven that were under 30 feet in length or 48 boats; any storage capacity provided at 205 Magee above the 48 boats is not comparable as the balance of the boats that used the Yacht Haven yard are too big and cannot be stored at 205 Magee. Using this analysis only 48 of the rack positions of the 205 Magee are comparable to the 400 at Yacht Haven, resulting in a comparable capacity of about 12%.

The above analysis assumes that all boats in 205 Magee are 30 feet in length. The Coastal Site Plan Review Application Report, dated September 7, 2012, Section 3.2, page 4 states: "...192 boats up to approximately 30 feet in length." this language is sufficiently vague to leave for interpretation as to the actual boat sizes that can be racked. Due to the tight nature of the 205 Magee site and lack of digital drawings, it is important that the actual

dimensions of the site and length of the boats that can be stored on the racks be provided with detailed measurements of the yard and rack area that will show the actual boat rack sizes and forklift maneuvering areas. Should some or all of the boats on the racks not be 30 feet in length then this comparison will need to be reviewed to determine the correct percentages.

Figure 6.1 – Graphic comparison of land allocations (not using the same scale)

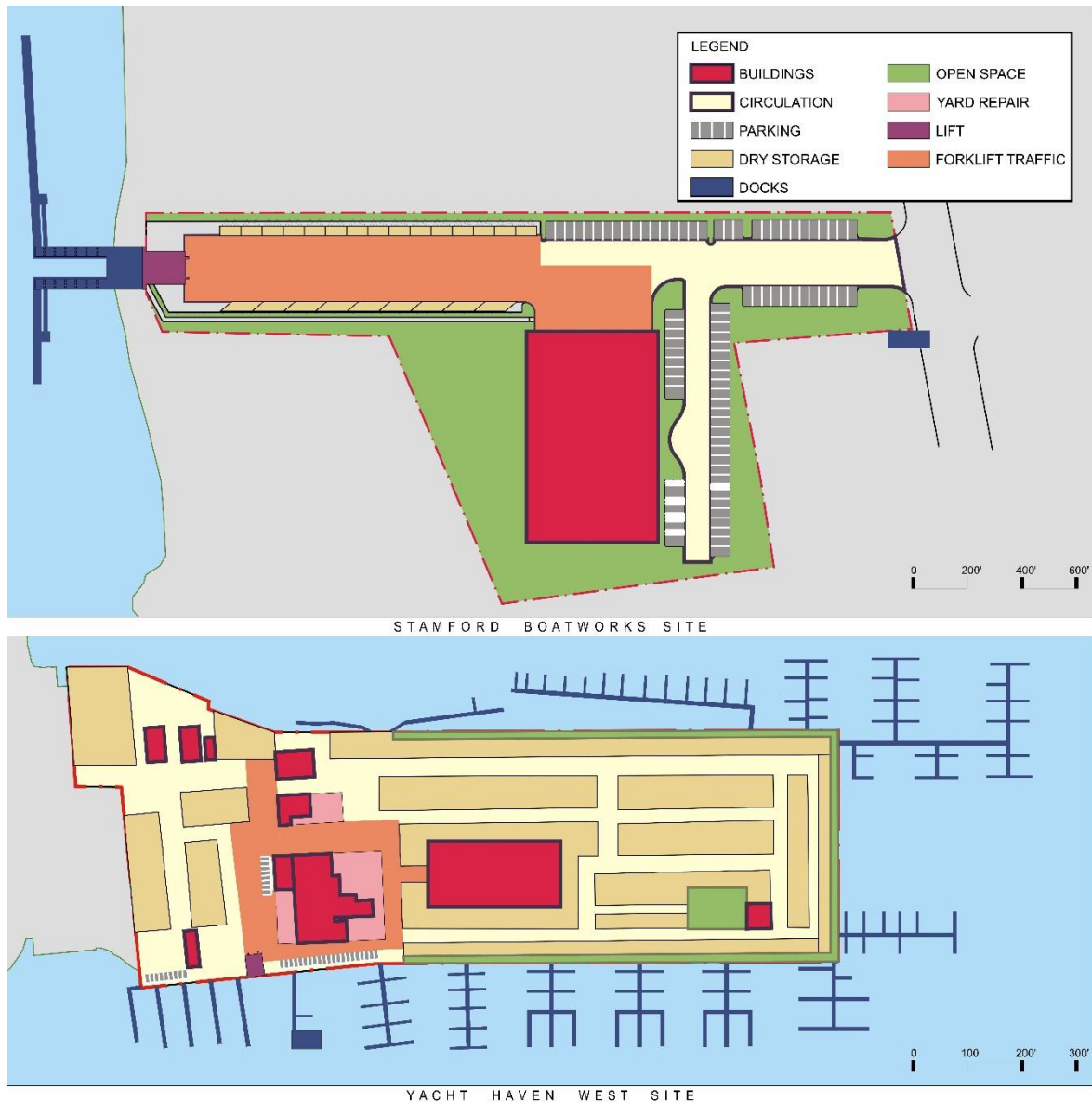
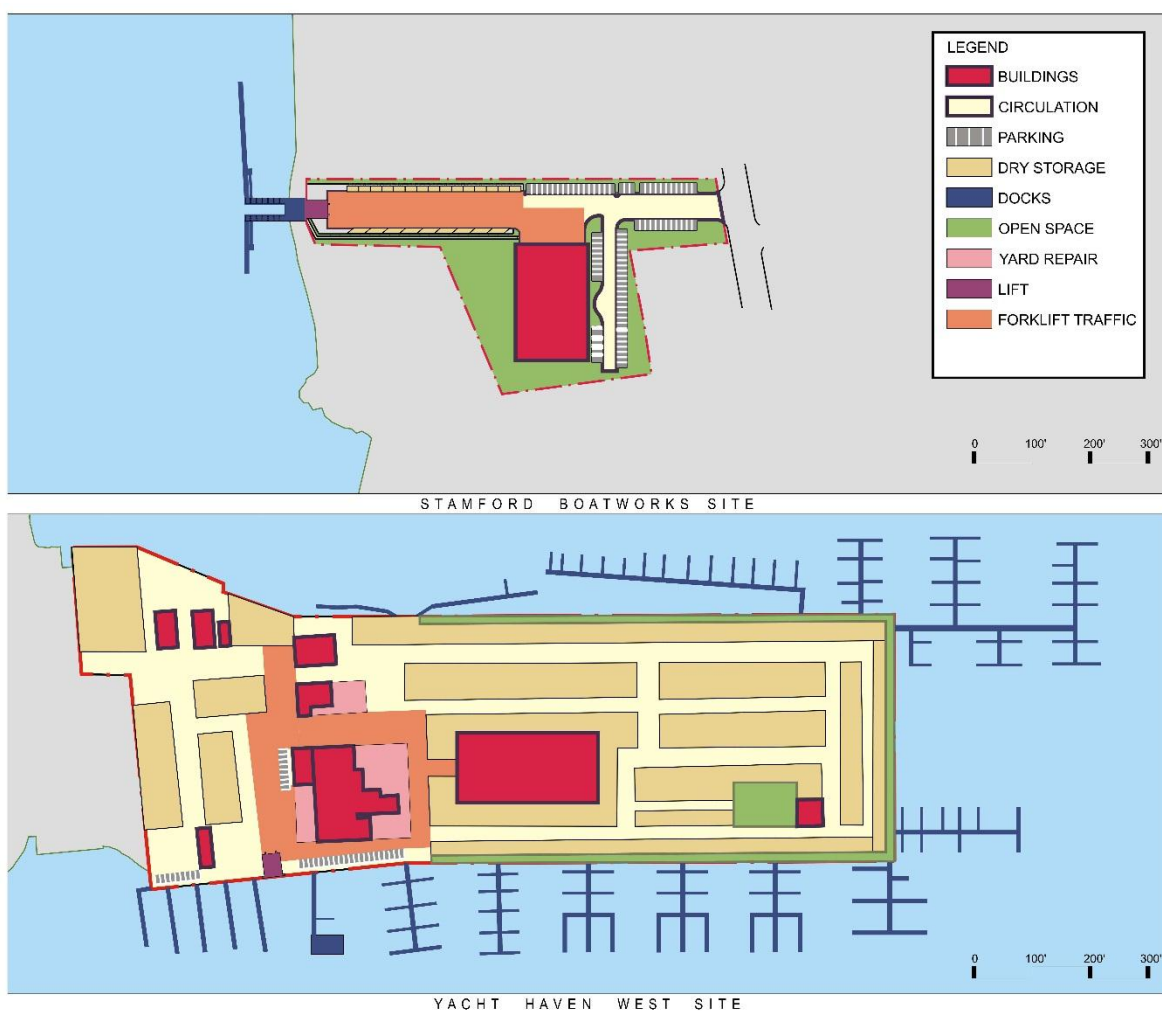


Figure 6.2 – Graphic comparison of land allocations (using the same scale)



Sailboats also make up about 81% of the boats stored at Yacht Haven and only 19% are powerboats or 76 boats. Unless the applicant can provide information as to how sailboats can be accommodated on the racks, then those cannot be accommodated at 205 Magee. No analysis was done to specifically segregate the powerboats by length to determine how many of the 76 boats are under 30 feet, but using the overall ratio previously stated of 12% of the boats under 30 feet or length, that would equate to a comparable capacity of 10 power boats (12% of the 76) in Yacht Haven can be accommodated at 205 Magee or 2.5% comparable capacity. However, since the exact ratio of powerboats by length is not known, we would suggest that the 12% overall comparable capacity be used.

Winter storage – The Yacht Haven site can accommodate 500 boats in winter, while the applicant indicates a wintertime storage capacity of 292 at 205 Magee. The applicant did not submit a plan showing the wintertime storage layout and how the facility would operate in the winter. For purposes of this analysis we have assumed that the additional 100 boats can be 30 feet in length.

Numerically the 292 boats compared with 500 equates to a 58% capacity, but once these numbers are adjusted by size, using the numbers provided by the applicant and the same ratios of boats over 30 feet in length as discussed above, the comparable capacity of 205 Magee will be capped at 60 boats (12% of 500 boats) or the same comparable capacity of 12%.

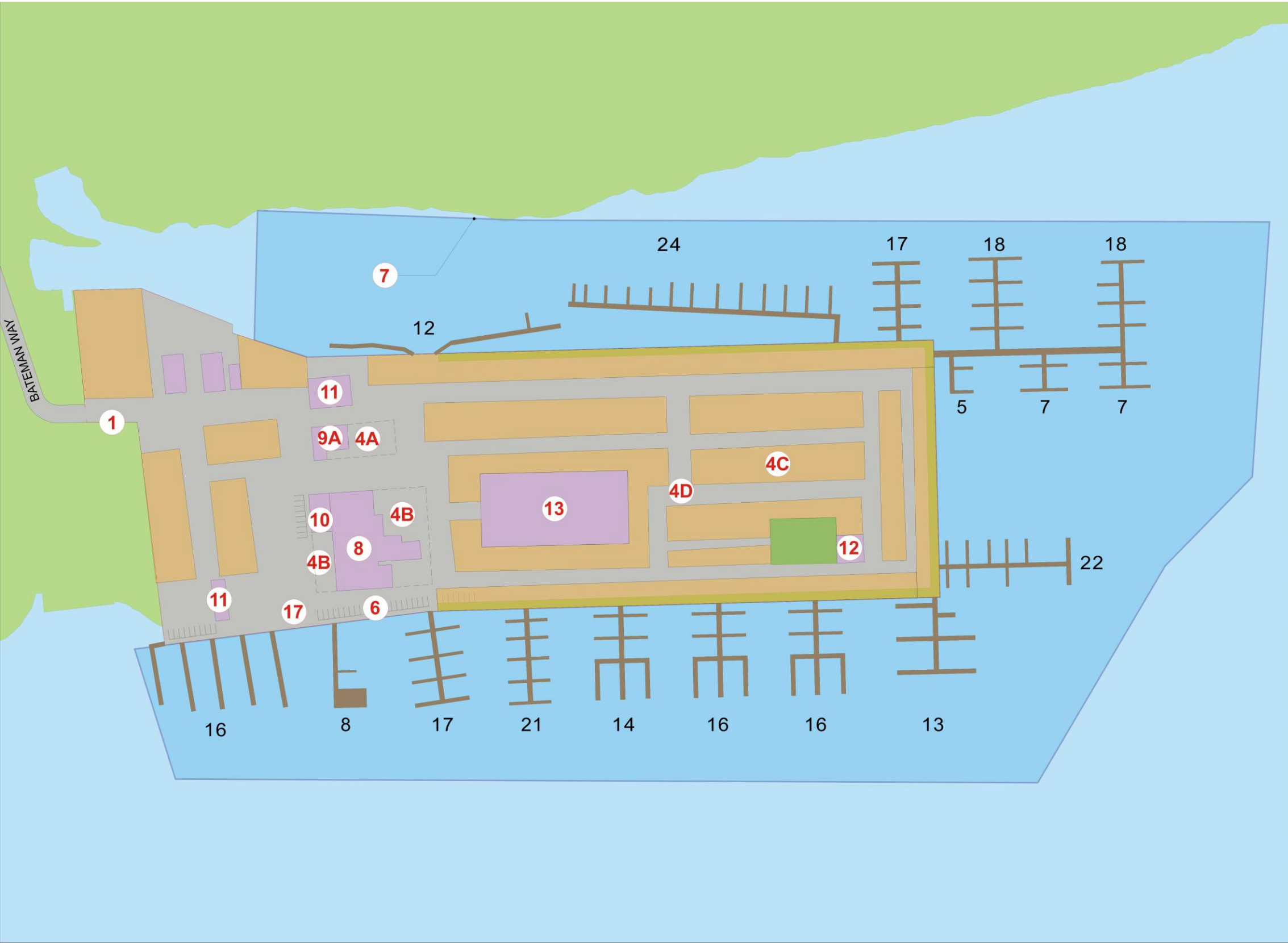
Maintenance – The Yacht Haven facility has allocated a total building area to repair services of 26,000 square feet while 205 Magee has 22,000 square feet; very similar. However, Yacht Haven has an additional 22,000 square feet of yard space for maintenance, while 205 Magee does not.

Fueling – The Yacht Haven facility has a fuel dock, while the 205 Magee does not. The applicant is silent as to whether fueling will be preserved at the Yacht Haven site.

The overall comparison of the two facilities is shown in Table 6.1 below.

Table 6.1 Summary of comparison of both sites				
	Yacht Haven	205 Magee	Percent met	Note
Wet slips	251	0	0%	The applicant needs to provide information relative to any slips left at yacht haven
Boat storage (summer)	400	192	50%*	*88% of the Yacht Haven boats will not fit at 205 Magee since they are over 30 feet in length No sailboats
Boat storage adjusted by size (summer)	400	48	12%*	This compares boats that are 30 feet and under. The applicant must show the length of the boats that can be stored on the racks. *Assumes all powerboats are under 30 feet in length, if not ratio can be as low as 2.5%
Boat storage (winter)	500	292	58%*	*88% of the Yacht Haven boats will not fit at 205 Magee since they are over 30 feet in length No sailboats
Boat storage adjusted by size (winter)	500	60	12%*	*Applicant must show how the additional 100 boats will be stored. Assumes all powerboats are under 30 feet in length, if not ratio can be as low as 2.5%
Maintenance	48000 sf	22000 sf	50%	No outside maintenance area
Navigation	60 feet wide 0.5 mile long channel	50 feet wide 1.0 mile long channel	50%	Could present need for one-way traffic to the 205 Magee site
Fuel dock	YES	NO	0%	Applicant is silent as to whether fueling will be preserved at the Yacht Haven site

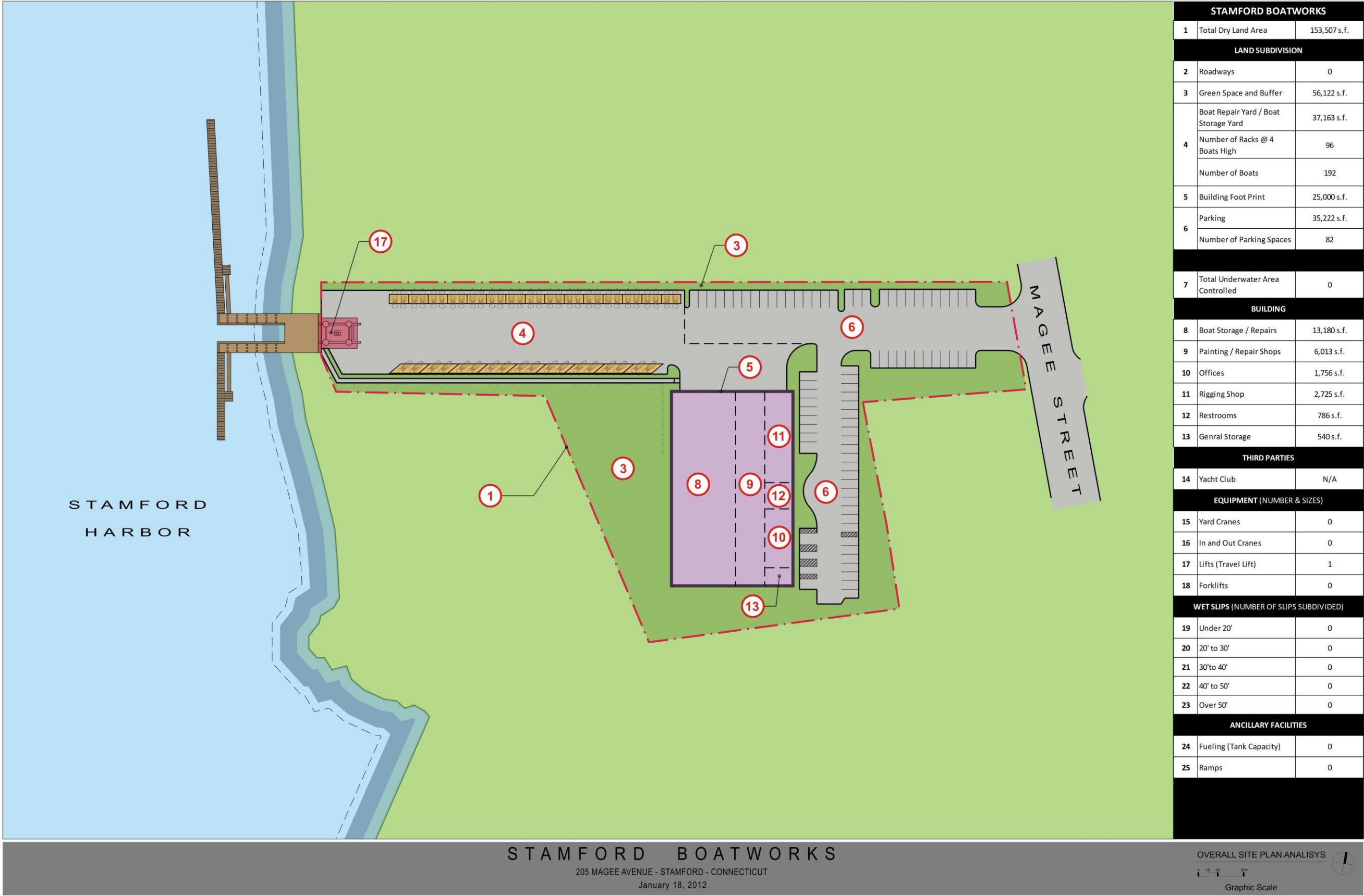
APPENDIX



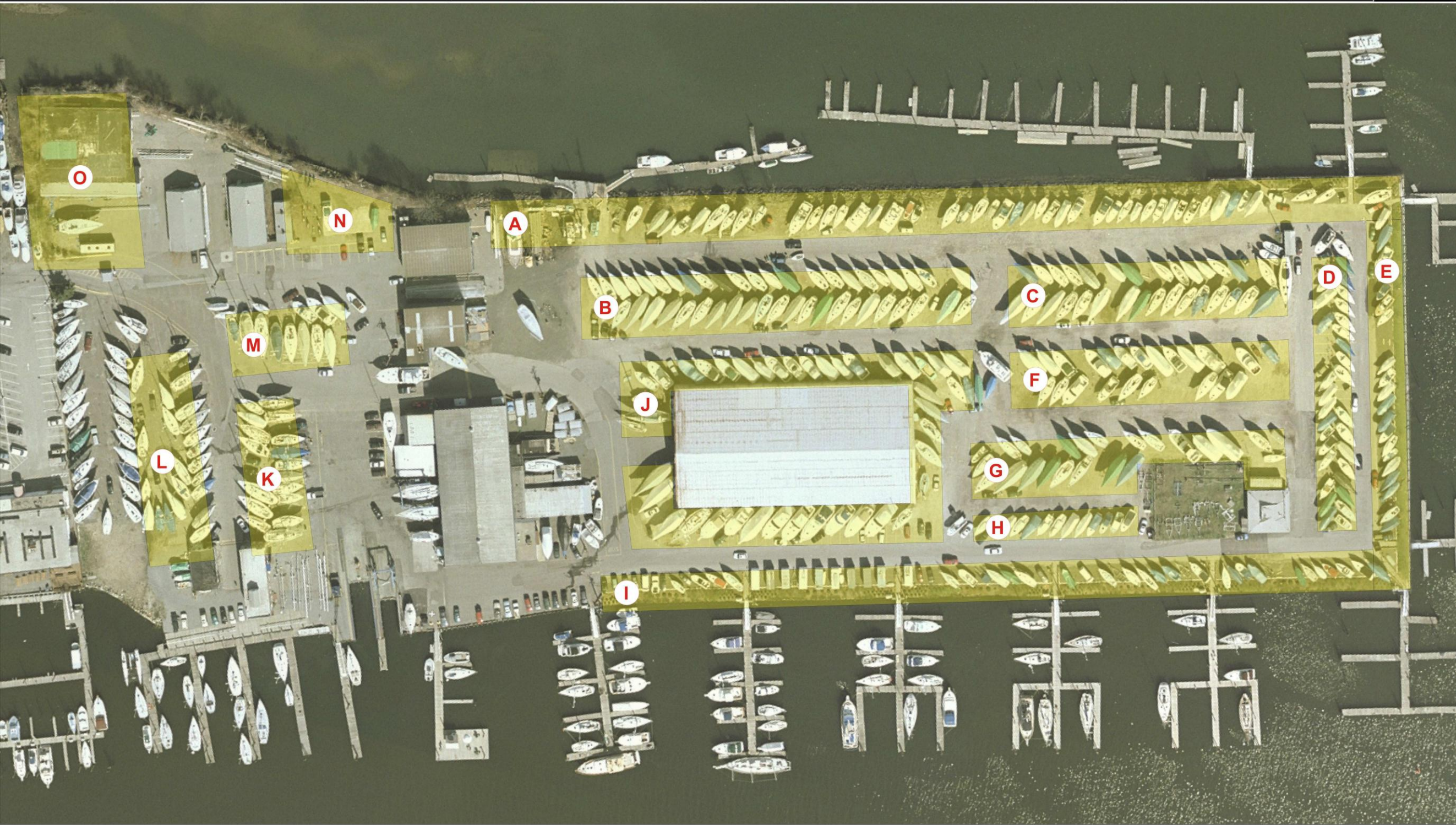
YACHT HAVEN WEST SITE		
1	Total Dry Land Area	605,048.04 s.f.
LAND SUBDIVISION		
2	Roadways	0
3	Green Space and Buffer	N/A
4	(A) Painting yard	6,723 s.f.
	(B) Boat Repair Yard	16,133 s.f.
	(C) Boat storage yard area	267,068 s.f. (6.13 acres)
	(D) Circulation	257,164 s.f. (5.9 acres)
	Number of Boats	N/A
5	Building Foot Print	57,960 s.f.
6	Parking	varies
	Number of Parking Spaces	40 to 200
7	Total Underwater Area Controlled	22 acres
BUILDING		
8	Boat Storage / Repairs	15,646 s.f.
9	Painting / Repair Shops	3,108 s.f.
10	Offices	2,268 s.f.
11	Rigging Shop / Other shop	6,901 s.f.
12	Restrooms	997 s.f.
13	General Storage	29,040 s.f.
THIRD PARTIES		
14	Yacht Club	N/A
EQUIPMENT (NUMBER & SIZES)		
15	Yard Cranes	1
16	In and Out Cranes	2
17	Lifts (Travel Lift)	2
18	Forklifts	2
WET SLIPS (NUMBER OF SLIPS SUBDIVIDED)		
19	Under 20'	0
20	20' to 30'	58
21	30'to 40'	122
22	40' to 50'	23
23	Over 50'	48
ANCILLARY FACILITIES		
24	Fueling (Tank Capacity)	6000 gallons gas 5,000 gallons diesel
25	Ramps	0

YACHT HAVEN WEST SITE
STAMFORD - CONNECTICUT
January 18, 2012





	A (30')	B(30-40')	C (30'-40')	D (30')	E (20'-30')	F (30')	G (40')	H (30')	I (20')	J (30'-50')	K (40')	L (30'-40')	M (30'-40')	N (30')	O (40')	TOTAL
POWER BOAT	9	0	0	6	5	12	4	6	4	22	0	0	3	2	0	73
SAIL BOAT	37	50	35	32	19	22	22	8	28	14	20	18	12	2	1	320
	46	50	35	38	24	34	26	14	32	36	20	18	15	4	1	393

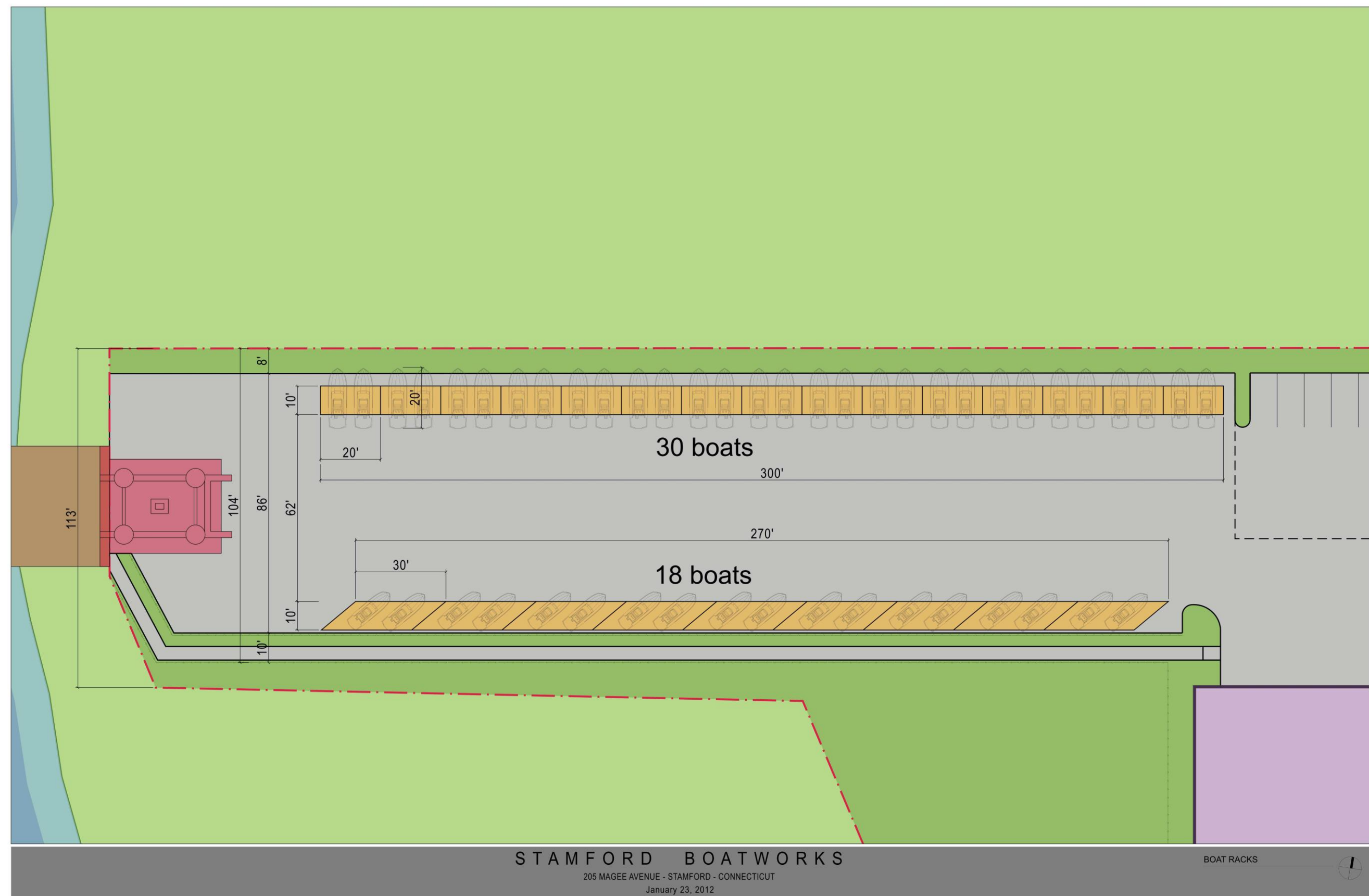


YACHT HAVEN WEST SITE

STAMFORD - CONNECTICUT
January 18, 2012

LAND STORAGE





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 - b. 1998 aerial photo
 - c. Three preliminary proposals for the expansion
2. Letter from John D. Freeman, **Harbor Point**, to Norman Cole, **City of Stamford Land Use Bureau**; *October 15, 2012*. Attachments:
 - a. Professional Market Study and Needs Analysis of the Stamford Harbor prepared by Integra Realty Resources - Hartford; *October 9, 2012*
3. Property Survey Depicting an Adjustment of Parcel Lines Between Northeast Utilities and Ponus Yacht Club prepared by **Redniss & Mead**; *April 30, 2005*
4. Report: "Choices for Change: Alternatives for Stamford's Waterfront" prepared by **Ralph M. Field Associates, Inc.** and submitted to **Stamford Planning Board**; *August 16, 1983*
5. Letter from John D. Freeman, **Harbor Point**, to Norman Cole, **City of Stamford Land Use Bureau**; *September 6, 2012*. Attachments:
 - a. Application of Waterfront-Magee for Special Exception
 - b. Final Site Plan Approval
 - c. Coastal Site Plan Approval for Property Located at 205 Magee Avenue
6. Letter from Craig M. Lapinski, P.E., LEED-AP, **Fuss & O'Neill**, to John Freeman, **Harbor Point Development LLC**; *September 27, 2012*. Attachments:
 - a. Table: Boat Yard Facilities Comparison
 - b. Figure 1: building key map for the former Brewers Yacht Haven West
 - c. Figure 2: site plan for the Stamford Boat Works
7. Plot Plan for 205 Magee Avenue, Stamford, Connecticut prepared by **Land Surveying Services, LLC** for **Wyeth Holdings Corporation, The City of Stamford Chicago Title Insurance Company**; *February 28, 2006*
8. Letter from Grant W. Westerson, **Connecticut Marine Trades Association**, to John Freeman, **Building and Land Technology** RE: Stamford Boat Works;